This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A method for monitoring a state of anesthesia or sedation resulting from the administration of one or more drugs to a patient, the drug or drugs inducing the state of anesthesia or sedation by altering the state or functioning of one or both of the cortex of the brain or the sub-cortical components of the nervous system, the method comprising the steps of:

(a) obtaining cortex-related EEG biopotential signal data from the patient;

(b) obtaining subcortex-related biosignal data from the patient, the subcortex-related biosignal data including at least bioimpedance signal data;

(c) calculating a first indicator based comprising a measure of the complexity of the EEG biopotential signal data, the first indicator being indicative of cortical activity in the patient;

(d) based on the subcortex-related biosignal data, calculating a set of indicators indicative of subcortical activity in the patient, the set of indicators including at least a second indicator calculated based on the bioimpedance signal data; and

(e) producing a composite indication based on the first indicator and on the set of indicators.

Claim 2 (previously presented): A method according to claim 1, wherein:

- step (d) includes calculating only the second indicator; and
- step (e) includes producing the composite indication from the first indicator and the second indicator.

Claim 3 (previously presented): A method according to claim 1, wherein

- step (b) further includes obtaining ECG signal data from the patient;
- step (d) further includes calculating a third indicator based on the ECG

signal data, the third indicator being indicative of the heart rate of the patient; and

- step (e) includes producing the composite indication from the first, second, and third indicators.

Claim 4 (previously presented): A method according to claim 1, wherein

- step (b) further includes obtaining EMG signal data from the patient;
- step (d) further includes calculating a fourth indicator based on the EMG signal data, the fourth indicator being indicative of electromyographic activity in the patient; and
- step (e) includes producing the composite indication from the first, second, and fourth indicators.

Claim 5 (currently amended): A method according to claim 3, wherein

- step ~~further~~ (b) further includes obtaining EMG signal data from the patient;
- step (d) further includes calculating a fourth indicator based on the EMG signal data, the fourth indicator being indicative of electromyographic activity in the patient; and
- step (e) includes producing the composite indication from the first, second, third, and fourth indicators.

Claim 6 (original): A method according to claim 1, wherein step (d) includes obtaining a measure of the rate at which changes occur in the bioimpedance signal data as the second indicator.

Claim 7 (previously presented): A method according to claim 6, wherein step (d) includes the steps of:

- differentiating the bioimpedance signal data to obtain derivation signal

data representing changes in the bioimpedance signal data;

- defining a threshold for the derivation signal data; and
- determining the rate at which the derivation signal data exceeds the threshold.

Claim 8 (original): A method according to claim 7, further comprising a step of suppressing the range of the derivation signal data to obtain suppressed derivation signal data, wherein the threshold is defined for the suppressed derivation signal data.

Claim 9 (original): A method according to claim 7, further comprising a step of adapting the derivation signal data between a minimum and a maximum value to obtain adapted derivation signal data, wherein the threshold is defined for the adapted derivation signal data.

Claim 10 (original): A method according to claim 7, further comprising the steps of

- suppressing the range of the derivation signal data to obtain suppressed derivation signal data; and
- adapting the suppressed derivation signal data between a minimum and a maximum value to obtain suppressed and adapted derivation signal data,

wherein the threshold is defined for the suppressed and adapted derivation signal data.

Claim 11 (previously presented): A method according to claim 1, wherein step (c) includes obtaining a measure of the entropy of the EEG biopotential signal data as the first indicator.

Claim 12 (original): A method according to claim 4, wherein step (d) includes obtaining a measure of the power spectrum of the EMG signal data as the fourth indicator.

Claim 13 (previously presented): A method according to claim 1, wherein the EEG biopotential signal data and the bioimpedance signal data are obtained through at least one sensor attached to the patient, the at least one sensor including at least one electrode used for obtaining both the EEG biopotential signal data and the bioimpedance signal data.

Claim 14 (original): A method according to claim 13, wherein steps (a) and (b) are performed simultaneously.

Claim 15 (previously presented): A method according to claim 14, wherein step (a) includes obtaining a biopotential signal from the patient, step (b) includes supplying electric current at a first frequency to the patient to obtain the bioimpedance signal data, and step (a) further includes removing electrical phenomena of the first frequency from the biopotential signal.

Claim 16 (original): A method according to claim 13, wherein steps (a) and (b) are performed on a time division basis.

Claim 17 (original): A method according to claim 1, wherein the first indicator and the set of indicators are supplied as input data to a device for administering drugs.

Claim 18 (previously presented): An apparatus for monitoring a state of anesthesia or sedation resulting from the administration of one or more drugs to a patient, the drug or drugs inducing the state of anesthesia or sedation by altering the state or functioning of one or both of the cortex of the brain or the sub-cortical components of the nervous system, the apparatus comprising:

- means for obtaining cortex-related EEG biopotential signal data from the patient;
- means for obtaining subcortex-related biosignal data from the patient, the subcortex-related biosignal data including at least bioimpedance signal data;

- means for analyzing the cortex-related EEG biopotential signal data to obtain a first indicator comprising a measure of the complexity of the EEG biopotential signal data;

- means for analyzing the subcortex-related biosignal data to obtain a set of indicators indicative of subcortex-related activity in the patient, the set of indicators including at least a second indicator calculated based on the bioimpedance signal data; and

- means for producing a composite indication based on the first indicator and the set of indicators.

Claim 19 (previously presented): An apparatus according to claim 18, wherein the means for obtaining the subcortex-related biosignal data comprises means for obtaining only a bioimpedance signal from the patient, the bioimpedance signal including the bioimpedance signal data.

Claim 20 (previously presented): An apparatus according to claim 18, wherein the means for obtaining the subcortex-related biosignal data includes first measurement means for obtaining at least one bioimpedance signal and at least one biopotential signal from the patient, the at least one bioimpedance signal including the bioimpedance signal data, and the at least one biopotential signal including at least one type of signal data from a group including ECG signal data and EMG signal data.

Claim 21 (previously presented): An apparatus according to claim 18, wherein the apparatus comprises a plurality of measurement electrodes of which at least one is common to the means for obtaining the cortex-related EEG biopotential signal data and to the means for obtaining the subcortex-related biosignal data.

Claim 22 (previously presented): An apparatus according to claim 21, wherein the means for obtaining the cortex-related EEG biopotential signal data and the means for obtaining the

subcortex-related biosignal data from the patient comprise, in total four patient electrodes.

Claim 23 (previously presented): An apparatus according to claim 18, wherein the means for analyzing the cortex-related EEG biopotential signal data and the means for analyzing the subcortex-related biosignal data are operably connected to a device configured to administer drugs to the patient.

Claims 24-29 (canceled)

Claim 30 (previously presented): A method according to claim 1 wherein:

- step (b) is further defined as obtaining subcortex-related biosignal data comprising skin conductivity signal data and
- step (d) is further defined as calculating a second indicator based on the skin conductivity signal data.

Claim 31 (previously presented): A method according to claim 30 wherein

- step (b) further includes obtaining ECG signal data from the patient;
- step (d) further includes calculating a third indicator based on the ECG signal data, the third indicator being indicative of the heart rate of the patient; and
- step (e) includes producing the composite indication from the first, second, and third indicators.

Claim 32 (previously presented): A method according to claim 30, wherein

- step (b) further includes obtaining EMG signal data from the patient;
- step (d) further includes calculating a fourth indicator based on the EMG signal data, the fourth indicator being indicative of electromyographic activity in the patient; and
- step (e) includes producing the composite indication from the first, second,

and fourth indicators.

Claim 33 (previously presented): A method according to claim 31, wherein

- step (b) further includes obtaining EMG signal data from the patient;
- step (d) further includes calculating a fourth indicator based on the EMG signal data, the fourth indicator being indicative of electromyographic activity in the patient; and
- step (e) includes producing the composite indication from the first, second, third, and fourth indicators.

Claim 34 (previously presented): An apparatus according to claim 18 wherein the means for obtaining the subcortex-related biosignal data comprises means for obtaining skin conductivity bioimpedance signal data.

Claim 35 (previously presented): An apparatus according to claim 34, wherein the means for obtaining the subcortex-related biosignal data includes first measurement means for obtaining at least one bioimpedance signal and at least one biopotential signal from the patient, the at least one bioimpedance signal including the skin conductivity bioimpedance signal data, and the at least one biopotential signal including at least one type of signal data from a group including ECG signal data and EMG signal data.